REMARKS

Claims 1-20 are presented for prosecution. No claim is amended. Claims 21-23 are new. No claim is cancelled.

Claims 1-5, 7-12, and 14-19 are rejected under 35 U.S.C. §102(b) as being anticipated by Zietlow et al, hereinafter Zietlow. Claims 6, 13, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zietlow in view of Mikkelson et al.

Specifically in reference to claims 1, 8, and 15, the Office Action asserts that Zietlow shows,

> "a first memory space for storing said target image, a second memory space *smaller than said first memory space*,
>
> a data processing unit for applying a sub-dividing algorithm to said target image to generate an array of rows and columns of sub-image tiles, each of said sub-image tiles being sized to be storable within a predetermined amount of memory capacity not greater than that of said second memory space, said target image being the composite of said sub-image tiles;
>
> a communication link coupling said first memory space to said second memory space *for transferring each of said sub-image tiles in turn from said first memory space to said second memory space*;
>
> said data processing unit further implementing an image generating routine for generating a printable sub-image block of each sub-image tile within said second memory space, assigning each printable sub-image block a coordinate parameter identifying a target location within a composite memory space, and transferring each printable sub-image block from said second memory space to a printer driver routine prior to transferring the next sub-image tile from said first memory space to said second memory space; wherein
>
> said printer driver routine correlates said composite memory space with the printable space on a printing media and controls the printing of each of said sub-image blocks to locations within said printing media in accordance with their respective coordinate parameter".

The Office Action then explains in the fourth paragraph of page 3 that, with respect to Zietlow's figure 1, "Bit Pattern Page Memory A" and "Bit Pattern Page

Memory B" are a first memory space for storing said target image, and a second memory space for storing said target image, respectively. Applicants respectfully disagree for two basic reasons.

Firstly, the Office Action appears to be equating bit printing (i.e. printing of individual character bits such as letters, numbers, etc.) to a complete "target image". As Zietlow explains, his printer reads a character pattern (i.e. letter, number, etc.) from pattern memory MXM and fills in the appropriate bit pattern into "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B" as determined by the character to be printed (as dictated by Dot Generator HPDG and page line buffer MM).

Nonetheless even if such an equivalence is made, Applicants respectfully point out that the claimed invention requires that the first memory space for storing said target image be larger than the second memory space. By contrast, Zietlow shows that both of his "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B" are of equal size since both are designed to hold exactly one print bit of information. This is more clear in Zietlow's Fig. 3, which shows that each print bit box consists of 5 rows and columns of print information to take advantage of his printer, which prints uses five write beams (col. 2, lines 29-33; col. 3, lines 42-45 and lines 56-60), and in Figs. 8-11, which show the rotation of individual print bit boxes of information (i.e. letter "E"). Thus, this is in direct conflict with the presently claimed invention.

Applicants further point out that the presently claimed invention requires applying a "sub-dividing algorithm to said target image to generate an array of rows and columns of sub-image tiles". According to the Office Action, the target image is stored in Zietlow's "Bit Pattern Page Memory A", but Applicants respectfully point out that the contents of "Bit Pattern Page Memory A" do not undergo any sub-dividing algorithm. Rather, they are stored into "Bit Pattern Page Memory A" from matrix memory MXM (which hold the character print pattern) and are thus already sub-divided. Furthermore, the matrix patterns in matrix memory MXM are fixed and predefined since they constitute the dot structure for standard characters (i.e. letters, numbers, etc.) and thus they also do not undergo any sub-dividing algorithm.

Additionally, the present invention further requires, "a communication link coupling said first memory space to said second memory space". Since the present Office Action equates "Bit Pattern Page Memory A" as the first memory space and equates "Bit Pattern Page Memory B" as the second memory space, Applicants which to point out that Zietlow shows no communication link between his "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B". This is most evident in Zietlow's Fig. 2, which shows no communication link between "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B". This is because the information being stored into "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B" comes from Dot Generator HPDG (Fig. 1), and is not transferred between "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B".

Also, Applicants respectfully point out that the present invention requires that each tile making up the target image stored in the first memory space ("Bit Pattern Page Memory A") be transferred *in turn* to the second memory ("Bit Pattern Page Memory B"). Contrary to this requirement, the data in each of Zeitlow's "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B" are transferred out for printing though a module that alters the staring printing point, depending on the amount of character rotation desired (i.e. 0°, 90°, 180°, or 270°). That is, the entire bit images of "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B" are transferred completely to block BRM, and are read out from there five bits at a time for the five writing beams.

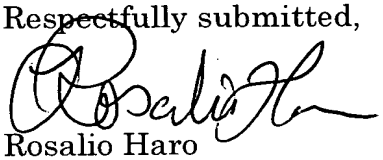
Furthermore, Applicants respectfully point out that the present invention further requires that the claimed "printer driver routine" correlate the composite memory space (which is comprised of the composite target image) with the printable space on a printing media. As it would be understood, if the printer's printing media is a page of paper, then the composite image made up of all the sub-image tiles that make up the target image in the first memory space must fill the entire page of paper. This is clearly contrary to Zietlow's teachings that define the information in "Bit Pattern Page Memory A" and "Bit Pattern Page Memory B" as printing a single character.

Nonetheless to remove any unintended ambiguity, new claims 21-23 make it clear that the target image in the first memory space encompasses an entire page of the printing media.

Thus, it is clear that the present invention, even read in its broadest sense, is not taught or suggested, singularly or in combination, with the cited prior art.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration of the present application.

Respectfully submitted,



Rosalio Haro
Registration No. 42,633

Please address all correspondence to:

Epson Research and Development, Inc.
Intellectual Property Department
150 River Oaks Parkway, Suite 225
San Jose, CA 95134
Phone: (408) 952-6000
Facsimile: (408) 954-9058
Customer No. 20178

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